Notice of Preparation of Initial Study

July 20, 2012

TO: State Clearinghouse
Responsible and Trustee Agencies
Interested Agencies and Parties

FROM: Sonoma County Water Agency
404 Aviation Blvd.
Santa Rosa, CA 95403

Mirabel Fish Screen and Fish Ladder Replacement Project

The Sonoma County Water Agency (Water Agency) is preparing an Initial Study for the Mirabel Fish Screen and Fish Ladder Replacement Project. An Initial Study is a preliminary analysis of a project's potential environmental impacts used to determine whether a Negative Declaration or an Environmental Impact Report will be prepared. It is a public document that analyzes the potential environmental effects related to construction, operation, and maintenance of a project and describes ways to reduce or avoid possible environmental impacts.

The Initial Study for the Mirabel Fish Screen and Fish Ladder Replacement Project will be prepared in accordance with the provisions of the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the Water Agency's *Procedures for the Implementation of CEQA*. The Water Agency will act as the Lead Agency pursuant to CEQA, and will consider all comments received in response to this Notice of Preparation (NOP), including comments from responsible and trustee agencies, property owners, and interested parties regarding the scope and content of the information to be included in the Initial Study. Agencies and interested members of the public are invited to provide input on the scope and content of the environmental information that should be included in the Initial Study.

SONOMA COUNTY WATER AGENCY

The Water Agency is a special district created by the California Legislature and operates under the direction of a Board of Directors, composed of the members of the Sonoma County Board of Supervisors. The law that created the Water Agency and defines its powers and duties authorizes it to produce and furnish surface water and groundwater for beneficial uses, to control flood waters, to generate electricity, to provide recreational facilities in connection with Water Agency water supply facilities, and to treat and dispose of wastewater.

BACKGROUND INFORMATION

The Russian River originates in central Mendocino County approximately 15 miles north of Ukiah. The Russian River watershed is shown on Figure 1. It drains an area of approximately 1,485 square miles, including much of Mendocino and Sonoma counties, and empties into the Pacific Ocean at Jenner in Sonoma County, about 20 miles west of Santa Rosa. The main channel of the Russian River is about 110 miles long and runs generally southward from its headwaters near Redwood and Potter Valleys, to Mirabel Park, where the channel's direction changes to generally westward as it crosses the Coast Range. Principal Russian River tributaries are the East Fork of the Russian River [which receives water diverted from the Eel River through Pacific Gas and Electric Company's (PG&E) Potter Valley Project], Big Sulphur Creek, Maacama Creek, Dry Creek, and Mark West Creek. Communities and cities along the Russian River include Ukiah, Hopland, Cloverdale, Geyserville, Healdsburg, Forestville, Mirabel Park, Rio Nido, Guerneville, Monte Rio, Duncans Mills, and Jenner.

Two major reservoir projects provide water supply storage in the Russian River watershed: 1) Coyote Valley Dam/Lake Mendocino, located on the East Fork of the Russian River three miles east of Ukiah, and 2) Warm Springs Dam/Lake Sonoma, located on Dry Creek 14 miles northwest of Healdsburg. The Water Agency is the local sponsor for these two federal water supply and flood control projects, collectively referred to as the Russian River Project. Under agreements with the United States Army Corps of Engineers (USACE), the Water Agency manages the water supply storage space in these reservoirs to provide a water supply and maintain summertime Russian River and Dry Creek streamflows. The Water Agency releases water from storage in these reservoirs where it flows downstream to the Water Agency's primary points of diversion at Wohler and Mirabel Park. At Wohler and Mirabel Park, the Water Agency operates a series of wells that pump water from the aquifer beneath the Russian River and deliver that water through its transmission pipeline system to municipalities, where the water is used primarily for residential, governmental, commercial, and industrial purposes.

Figure 1. Russian River Watershed

At Mirabel, the Water Agency operates an inflatable dam approximately 2,600 feet downstream of the Wohler Bridge (Figure 2) that is used seasonally. When the dam is inflated, the water level behind the dam rises by 11 feet, which submerges a diversion structure consisting of drum fish screens and pump intake piping. (Figures 3 and 4). The Water Agency uses this diversion structure to pump water from the Russian River into infiltration ponds adjacent to the Russian River. These infiltration ponds help to recharge the gravel aquifer underneath the Russian River and enhances the Water Agency's ability to more efficiently collect naturally filtered groundwater. When the dam is inflated, two fish ladders on either end of the dam allow fish passage. The Water Agency operates a video monitoring system at the fish ladders to track fish passing upstream or downstream of the inflatable rubber dam. The replacement of the existing fish screens, the modification of the intake structure, and the modification of one of the existing fish ladders is the subject of the Mirabel Fish Screen and Fish Ladder Replacement Project.

The replacement of the Mirabel fish screen portion of the project is required by the National Marine Fisheries Service (NMFS) 2008 *Biological Opinion for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the U.S. Army Corps of Engineers, the Sonoma County Water Agency, and the Mendocino County Russian River Flood Control and Water Conservation District in the Russian River Watershed* (Russian River Biological Opinion). Studies found that the existing fish screening facilities at the diversion structure perform less than adequately for full protection of fish and downstream migration. NMFS' Russian River Biological Opinion requires that the fish screens be replaced by October 2014 to meet contemporary performance criteria. These guidelines and criteria are summarized in a document prepared by NMFS titled "Fish Screening Criteria for Anadromous Salmonids" (NMFS 1997).

Additionally, the Water Agency is interested in replacing one of the existing fish ladders to complement the new fish screens and to better enhance fish passage while increasing operational flexibility with the inflatable dam. The Water Agency currently inflates the dam with a notch to concentrate flows over a specific portion of the dam (Figure 5). Fish monitoring studies have shown that fish passage downstream over the inflatable dam is enhanced through the addition of this notch. However, maintaining this notch presents operational challenges. With the notch in the dam, it is not possible to maintain consistent downstream flows due to the expansion and contraction of the dam in response to heat and sunlight. The proposed fish ladder replacement would allow for flows through the fish ladder that are attractive to fish migrating downstream, so that notching the inflatable dam would no longer be necessary. In addition to reduce current operational challenges, the proposed design of the new fish ladder (proposed vertical slot fish ladder versus the existing

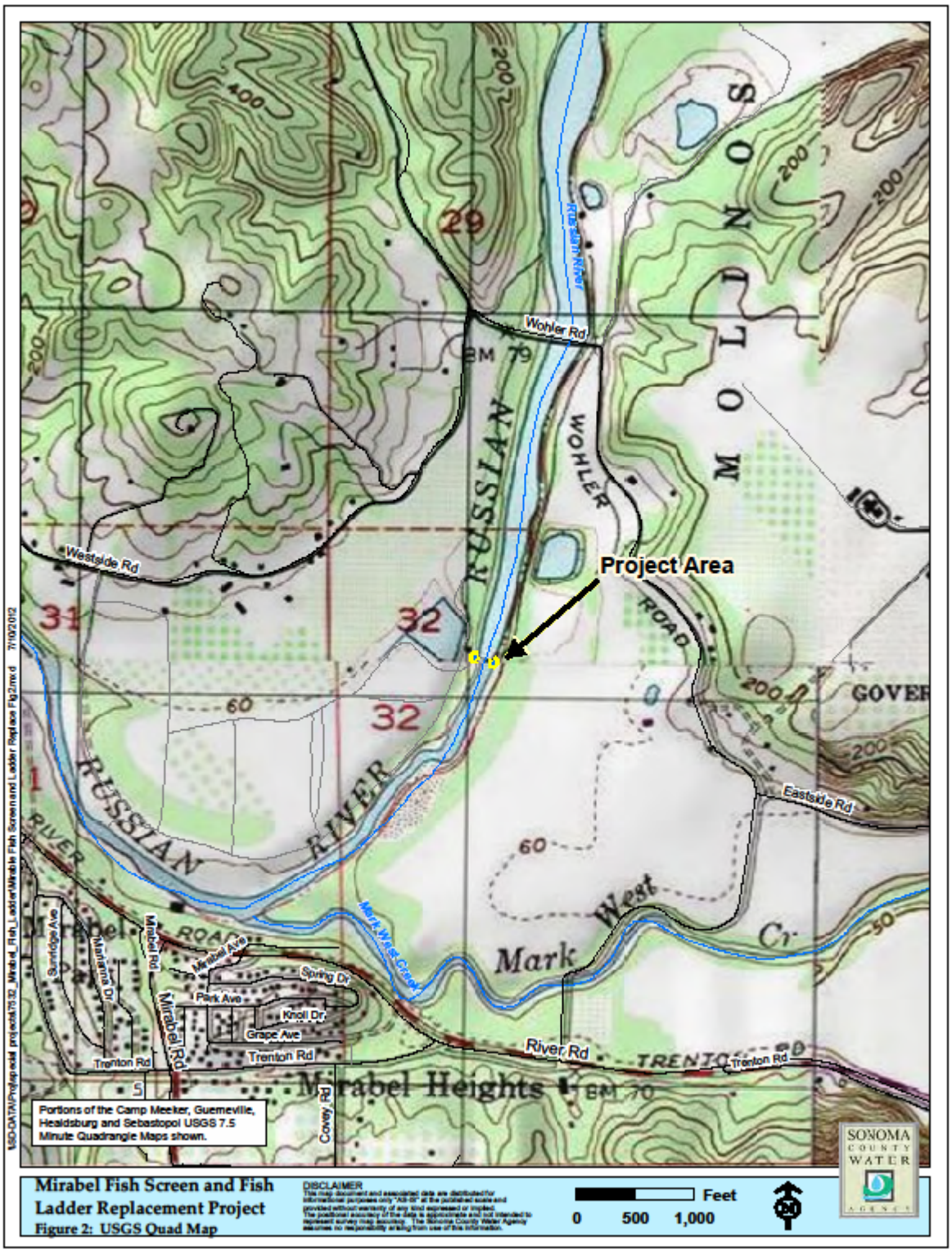

Figure 2. Location of Mirabel Inflatable Dam

Denil type fish ladder) would expand the range of flows and water levels that the fish ladder would be effective for fish passage.

A redesign of the fish ladder would allow the Water Agency to enhance existing video monitoring and provide better opportunities to view fish migration. The new fish ladder facility would contain a dedicated viewing window room that would house the video monitoring equipment and would only be accessible to employees. A separate viewing window area and viewing platform are also proposed as part of the upgrades to the facility. The Water Agency currently brings approximately 3,500 schoolchildren to the existing fish ladder facility at Mirabel as part of the Water Agency's Water Education Program. The proposed viewing areas will enhance the visitor experience by providing a better overall view of the facility and by providing a view into the side of the fish ladder. During the migration season, the viewing window would allow people to see fish moving through the fish ladder.

Figure 3. Existing Mirabel Fish Ladder and Fish Screen/Intake Structures

Figure 4. Mirabel Inflatable Dam

Figure 5. Mirabel Inflatable Dam With Notch

MIRABEL FISH SCREEN AND FISH LADDER REPLACEMENT PROJECT

Objective

The objective of the Mirabel Fish Screen and Fish Ladder Replacement Project is to provide a fish screen that meets hydraulic design criteria to avoid impacts for threatened and endangered fish, maintain or improve fish passage at the fish ladder, and to improve monitoring and educational opportunities at the Mirabel inflatable dam and diversion facilities.

Location

The Mirabel Fish Screen and Fish Ladder Replacement Project would be located at the site of the Water Agency's existing inflatable rubber dam along the Russian River approximately 2,600 feet downstream of the Wohler Bridge in Sonoma County, California. Proposed improvements would occur on the western bank of the Russian River. No improvements are proposed for the existing fish ladder on the eastern bank of the Russian River.

Description

Project components consist of those relating to the fish screen replacement and those relating to the fish ladder modifications. Project construction activities would require isolating the work area from the active flow of the Russian River, removing the existing fish screen/intake and fish ladder structures on the western bank of the Russian River, and constructing the new fish screen/intake and fish ladder structures. The new facilities would extend approximately 40 feet farther upstream and approximately 100 feet farther downstream than the existing facilities. This larger footprint is necessary to meet contemporary fish screen and fish passage design criteria. Figure 6 shows a conceptual design drawing of the proposed project components.

Fish Screen

The proposed intake screen would consist of six 12-foot tall by 6-foot wide panels, with a total area of 432 square feet. The new fish screens would also incorporate a cleaning system to ensure that the screen material does not become clogged. Clogged screens result in higher flows through unclogged portions of the screen, which can lead to fish getting trapped against the screen. The cleaning mechanism is anticipated to be an electric motor-driven mechanical brush system that periodically moves back and forth to clean the intake screen structure.

Fish Ladder

A vertical slot type fish ladder is the recommended fishway to provide passage for upstream migrating salmonids. Vertical slot fish ladders are commonly used for salmon and steelhead (among other fish species) throughout the world. A vertical slot fish ladder consists of a sloped, reinforced concrete rectangular channel separated by vertical baffles with 15-inch wide slots that extend down to the entire depth of the baffle. The baffles are located at even increments to create a step-like arrangement of resting pools.

The design would be self-regulating and provide consistent velocities, flow depths, and water surface differentials at each slot throughout a range of operating conditions. It is anticipated that the ladder will be configured to accommodate a range of fish passage conditions while the inflatable rubber dam is up and river flows range from 125 to 800 cfs. Fish passage while the dam is down would also be accommodated, but is not the primary focus of design.

Figure 6. Mirabel Fish Screen and Fish Ladder Replacement Project Site Plan

Supporting Components

The project design would also include a variety of other components that would support the primary fish screen and fish ladder aspects of the project. These other components consist of items such as replacement of the buoy warning line upstream of the inflatable dam, modification of the existing access road to the project site, and the incorporation of a viewing gallery and fish monitoring equipment into the project design.

ISSUES TO BE ADDRESSED IN THE INITIAL STUDY

In accordance with CEQA, the Mirabel Fish Screen and Fish Ladder Replacement Project Initial Study will address the potential environmental impacts, either individually or cumulatively, associated with the construction, operation, and maintenance of the proposed project. Specific areas of analysis in the Initial Study will include: Aesthetics, Agricultural Resources, Air Quality, Biological/Fisheries Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use, Noise, Public Services, Recreation, Transportation/Circulation, and Utilities and Service Systems. Where feasible, mitigation measures will be proposed to reduce or avoid impacts. Other areas of analysis may be added based on input from the public and public agencies during the NOP review period. Decision-makers, responsible and trustee agencies under CEQA, and interested persons and parties will also have an opportunity to comment on the Initial Study after it is published and circulated for public review.

JURISDICTIONAL/PERMITTING AGENCIES

The following are public entities and agencies that may require review of the project or that may have jurisdiction over the project area:

- U.S. Army Corps of Engineers
- National Marine Fisheries Service
- California Department of Fish and Game
- Regional Water Quality Control Board, North Coast Region
- Sonoma County Permit and Resource Management Department

PUBLIC COMMENT PERIOD FOR THIS NOTICE OF PREPARATION

The public comment period will close at 5:00 p.m. on August 24, 2012, which is 35 days after the date of publication. Please include a name, address, and telephone number of a contact person in your agency for all future correspondence on this subject. Please send comments to:

David Cuneo
Sonoma County Water Agency
404 Aviation Boulevard
Santa Rosa, CA 95403.

Comments may also be submitted electronically to: david.cuneo@scwa.ca.gov

Documents or files related to the Mirabel Fish Screen and Fish Ladder Replacement Project are available for review online at www.sonomacountywater.org, or at the Water Agency's office located at 404 Aviation Boulevard, Santa Rosa, California, 95403. If you have any questions regarding this Notice of Preparation, or if you wish to update information on our mailing list, please contact David Cuneo, Senior Environmental Specialist, at (707) 547-1935.

You may also submit comments electronically at the Water Agency's website:

www.sonomacountywater.org/rrifr